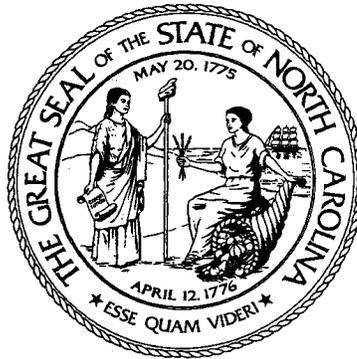


LEGISLATIVE RESEARCH COMMISSION

DIGITIZATION OF PUBLIC RECORDS BY STATE ARCHIVES



REPORT TO THE
2000 SESSION OF THE
1999 GENERAL ASSEMBLY
OF NORTH CAROLINA

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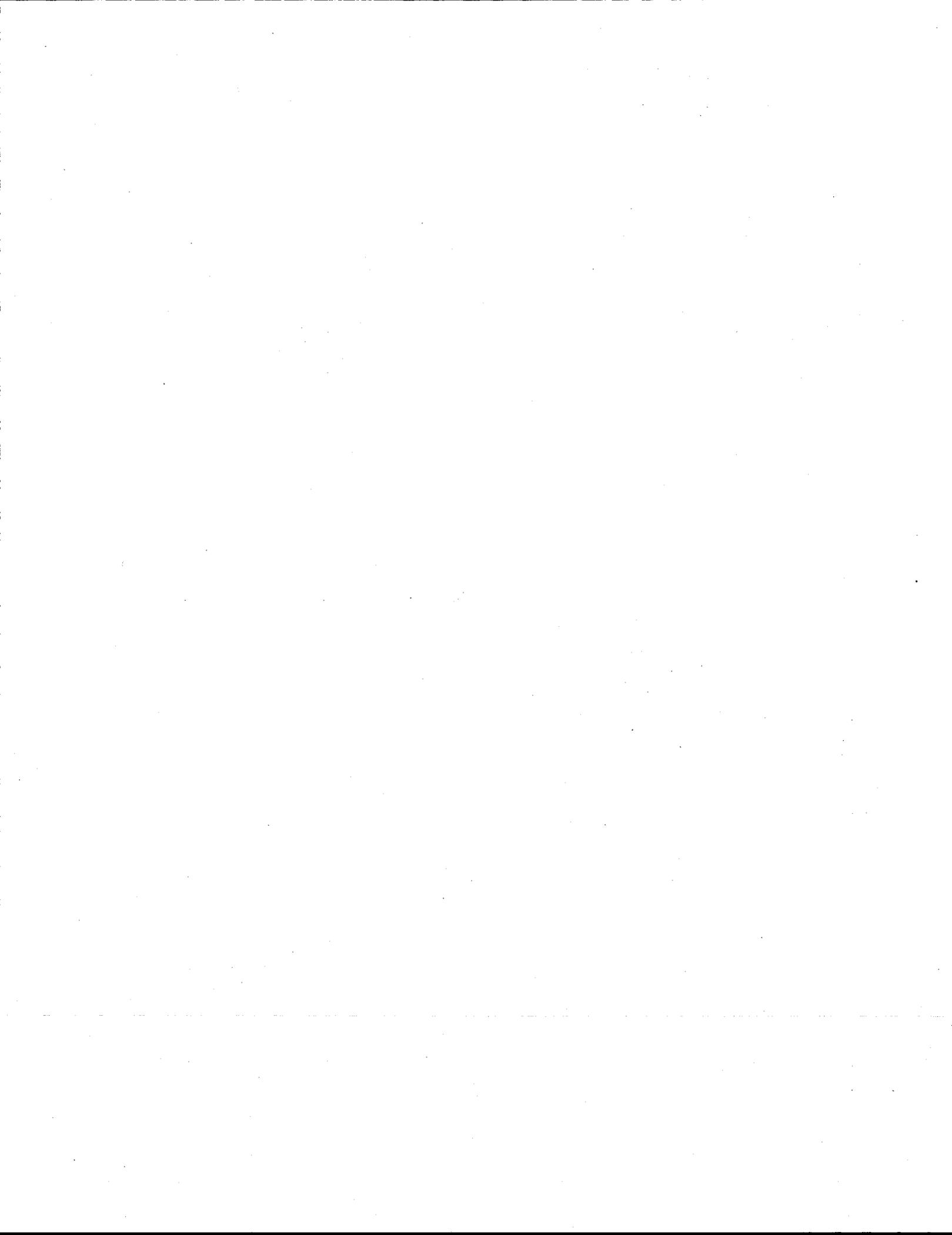
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STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH, NC 27601



May 4, 2000

TO THE MEMBERS OF THE 1999 GENERAL ASSEMBLY (REGULAR SESSION 2000):

The Legislative Research Commission herewith submits to you for your consideration its 2000 interim report on digitization of public records. The report was prepared by the Legislative Research Commission's Committee on Digitization of Public Records by State Archives pursuant to G.S. 120-30.17(1).

Respectfully submitted,

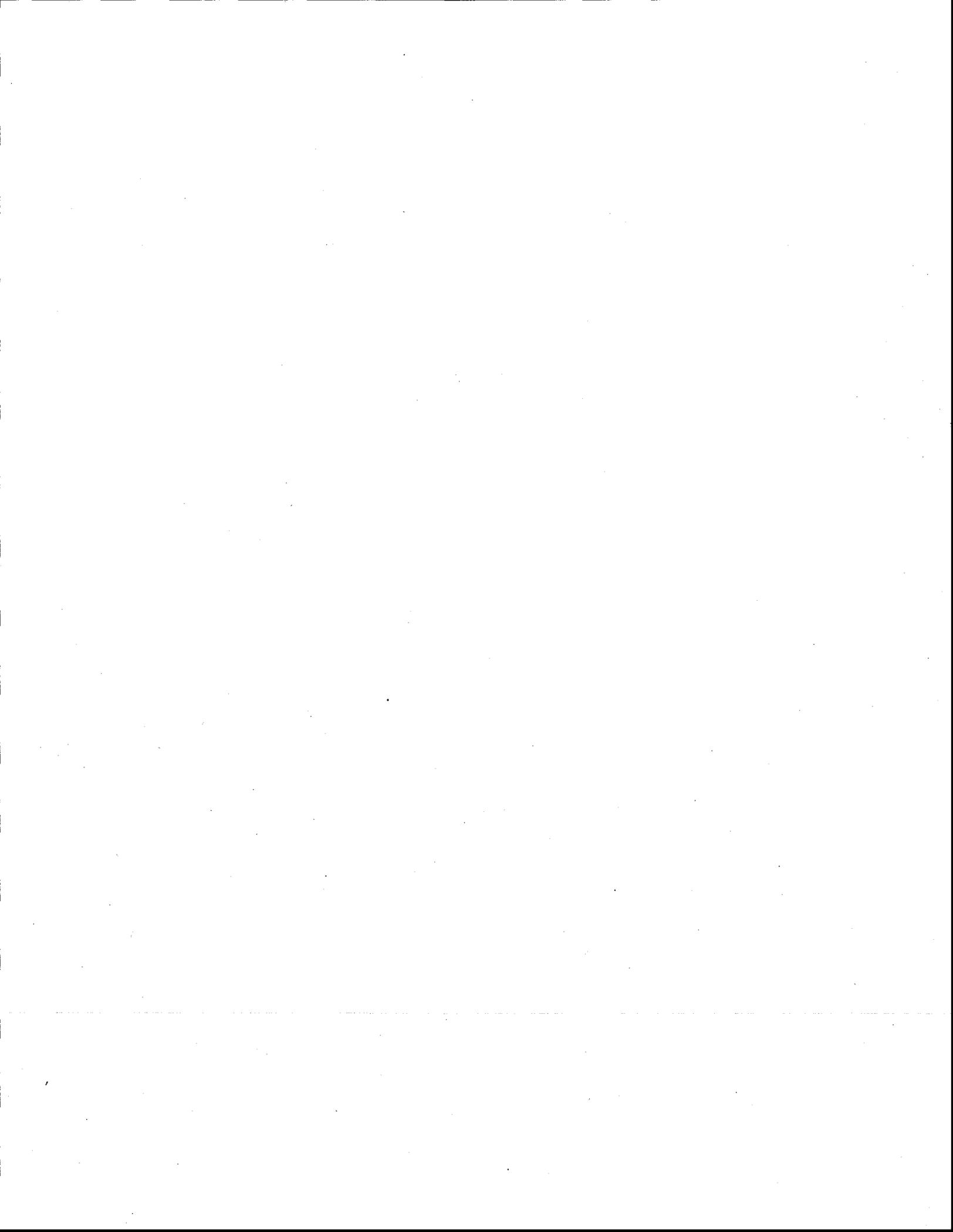
Handwritten signature of James B. Black in cursive script.

James B. Black
Speaker of the House

Handwritten signature of Marc Basnight in cursive script.

Marc Basnight
President Pro Tempore

Cochairs
Legislative Research Commission



1999 - 2000

LEGISLATIVE RESEARCH COMMISSION

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PREFACE

The Legislative Research Commission, established by Article 6B of Chapter 120 of the General Statutes, is the general purpose study group in the Legislative Branch of State Government. The Commission is cochaired by the Speaker of the House and the President Pro Tempore of the Senate and has five additional members appointed from each house of the General Assembly. Among the Commission's duties is that of making or causing to be made, upon the direction of the General Assembly, "such studies of and investigations into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" (G.S. 120-30.17(1)).

The Legislative Research Commission, prompted by actions during the 1998 Session and 1999 Sessions, has undertaken studies of numerous subjects. These studies were grouped into broad categories and each member of the Commission was given responsibility for one category of study. The Cochairs of the Legislative Research Commission, under the authority of G.S. 120-30.10(b) and (c), appointed committees consisting of members of the General Assembly and the public to conduct the studies. Cochairs, one from each house of the General Assembly, were designated for each committee.

The study of digitization of public records was authorized by Part I, Section 2.1 (1) h of Chapter 395 of the 1999 Session Laws (Regular Session, 1999). The relevant portion of Chapter 395 is included in Appendix A.

The Legislative Research Commission authorized this study under authority of G.S. 120-30.17(1) and grouped this study in its Governmental Agency and Personnel Issues area under the direction of Representative Steve W. Wood. The Committee was chaired by Representative Margaret M. Jefffus and Mr. David Ferriero. The full membership of the Committee is listed in Appendix B of this report. A committee notebook containing the committee minutes and all information presented to the committee will be filed in the Legislative Library by the end of the 1999-2000 biennium.

COMMITTEE PROCEEDINGS

The Legislative Research Commission's (LRC) on Digitization of Public Records by State Archives met four times to study issues relating to the digitization of public records. The minutes are on file in the Committee notebook in the Legislative Library.

FEBRUARY 24, 2000

The Committee held its first meeting on February 24, 2000. The co-chairs, Representative Margaret Jeffus and Mr. David Ferriero welcomed members, introduced Committee staff, and reviewed the purpose of the Committee, which included legislation that was introduced in the 1999 Legislative Session. The Committee then adopted the budget.

AGENCY PRESENTATIONS

**North Carolina Department of Cultural Resources
Mr. Jeffrey Crow, Director, Division of Archives and History**

To underscore requirements of public records' administration, Committee business was initiated with presentations from representatives of the Department of Cultural Resources and the NC Register of Deeds Association, i.e. custodians of the records.

The mission of the division is to promote and safeguard our documentary heritage by providing assistance on records management, preserving permanently valuable documents from state and local governments and private citizens, and providing access to all open records. Information technology is critical in supporting the responsibilities of the Archives and Records Section. Their first function provides access to information to citizens who cannot travel to Raleigh. Second provides faster and easier

responses to inquiries about information found in public documents, and third is the preservation of fragile and heavily used documents by replacing the originals with digitized copies and withdrawing the originals to be stored in a controlled environment.

The North Carolina State Archives Division is actively pursuing opportunities to increase access to documents and finding aids through pilot projects and by participating in other initiatives in the public and private sector. Mr. Crow stated that there are limitations to providing digitized documents and finding aids to the public that include a lack of funding, no additional staffing and more pressing needs such as lack of storage. He presented these additional points in regard to technological experience and pursuits in the division:

- Metadata (simply defined as information about data) is more important than actual images. There are numerous finding aids and indexes to state and local government records and private manuscript collections that are already available in paper format. Providing this information electronically will enhance access to these records inexpensively compared to the cost of providing images of the actual documents.
- Digitization is not a recommended preservation medium like microfilm. Digitization is a type of continued and enhanced access to material that is used often by the public and, due to its condition, needs to be withdrawn. This method can preserve fragile and heavily used documents.
- The Archives and Records Section already owns a tremendous amount of preservation microfilm that could be used to create digital images for posting on the Internet.

- The State Archives provides several finding aids on their web site. They are in HTML (Hypertext Markup Language, common language of any web document).
- Through the funding of a Research Libraries Group, Inc. (RLG) grant, they are working on encoding sixteen finding aids in a form of SGML (Standard Generalized Markup Language), known as EAD (Encoded Archival Description). EAD is a set of rules for designating the intellectual and physical parts of archival finding aids so that the information contained therein may be searched, retrieved, displayed, and exchanged in a predictable platform-independent manner. The archives participated two years ago in another RLG-funded project known as *Marriage, Women, and the Law, 1814-1915*. It was the result of a collaborative digital collections project that focused on family law and domestic relations in the 19th century.
- The division needs to preserve the more than 50,000 cubic feet of permanently valuable documents in its custody from state and local governments and private citizens.
- Information technology can provide access to citizens who cannot travel to Raleigh; can provide access to schoolchildren in a timely manner; and, can preserve fragile and heavily used documents.
- The division is trying to meet the challenge by pursuing opportunities to increase access to records management guidelines and retention-disposition schedules, to index finding aids that describe the permanent holdings, and to selected documents of special interest.
- The division is constantly being asked when will everything be on-line? A concern is that, as they place more and more on the web, the requests will increase.

As well as being concerned about public expectations and costs, Mr. Crow is concerned about providing access to those who do not have computers and digitized resources. It is important to provide information in non-technical ways such as printed finding aids and guides.

The division also has to be concerned about the legal issues. Digitizing records is not permanent. It is not a recommended preservation medium like microfilm. It is essential that all digitized records be created in an environment that ensures their authenticity and reliability. There is a need to be concerned about copyright issues.

The division has to be sure that the vendors understand the needs when they make their presentation. Vendors tend to promise more than they can provide, underestimate the cost and requirements, and a lot of the work must be done on site. Currently, there is a forty per cent turnover in the field of digitization per year. In Mr. Crow's words:

"New technologies offer many opportunities for providing greater access to information. More and more citizens have computers and Internet connectivity and expect government services and resources to be available on-line at any time. This environment challenges the State Archives to provide enhanced access to North Carolina's documentary resources through digitization. Yet the price of these new public services is high. Other states have made significant commitments to provide these services and can point with pride to their achievements. The State Archives has taken initial steps but cannot implement a real digitization program without the commitment of sufficient state resources to this initiative."

The division's long-range plans are as follows: (1) create a user-friendly version of MARS; (2) Create hyperlinks from record descriptions in MARS to detailed finding aids and/or images; (3) increase number of record descriptions in MARS; and (4) "dump" several existing indexes into MARS. In addition, there are more long-range plans such as: (1) to provide more HTML and SGML versions of finding aids for existing state government records, private manuscripts, organizations, etc., and (2) to develop an on-going program of digitizing and making available actual documents and photographs.

The division's cautions and concerns are as follows: cost, public expectations, access vs. preservation, increases in public demand, providing access to under served populations, outdated and/or proprietary hardware and software, instability of imaging industry, vendor relationships, and legal issues of authenticity, privacy, and copyright. The expansion budget request for Cultural Resources, Archives and History Division, for 1999-00 was for \$312,933 and 2000-01 is for \$254,251.

Senator Webster was recognized for a series of questions. Mr. Crow responded to these questions as follows: Virginia is ahead of North Carolina in digitization of records. Metadata is information about data (example, the menu in a restaurant is Metadata as to what is in the kitchen). Metadata, digital imaging and electronic storage are very important issues and the division is recommending that North Carolina proceed with digitization. Also, there is a process where you can digitize the images themselves as the State of Virginia has done. A digital repository is something Virginia has done. It is needed in North Carolina and the division is authorized by General Statute 132 to manage the states' records. The state is producing millions and millions of records in electronic format and right now we have no way to be certain that these records will be there years from now, unless we come up with some method to preserve them in an electronic format. This is what a digital repository ultimately would do, but we do not have one yet. Digitized records are not permanent but paper and microfilm are much more permanent and are recommended for archival value.

Mr. Crow continued that a Federated Metadata Depository is an initiative in state government, and should have uniformed standards across the board so various parts of state government could communicate with each other through electronic records. Mr. Crow stated that the division now charges a fee to obtain certain documents but if it were available electronically, there would be no fee. However, personnel would be needed to manage the system and give out material. They will still have to manage paper records along with the electronic records. He does not recommend destroying the paper records, and can save records on microfilm. We know we can save it for five hundred years but on digitization we are not sure of how long it would be available.

Representative Barefoot complimented Mr. Crow on the great job that the Division of Archives and History does for the citizens for the State of North Carolina in preserving our heritage with legal resources. He inquired if it was going to be important to put material about Metadata on line rather than actual images of the document with the exception of some particularly useful or a valuable collection. Mr. Crow stated that he identified several items in his previous remarks. They have an internal committee that sets the criteria of what we think would be the most useful collections to place on the Internet. They have 30,000 reels of microfilm. If they started, there is a tremendous amount of records there that could be placed on the Internet if they had sufficient resources, including wills, state records, tax records or whatever.

Mr. Ferguson asked about the dollars per year that Virginia put in their digitization program. Mr. Crow stated that he did not know. Mr. Crow stated that he and Secretary Betty Ray McCain are planning a trip near the end of March to the Library of Virginia and see their digitization projects first hand. We do know that they have had some grants and are not using all taxpayers' money. Mr. Ferguson wanted to know if North Carolina has gotten any foundation money. Mr. Crow stated that they have received some for a number of projects, but nothing on the scale of what Virginia has received.

Representative Gulley wanted to know if Mr. Crow was saying that this is for quick access but not long-term preservation? Mr. Crow confirmed that it is for quick and easy access and make it unnecessary for someone to come to Raleigh for the information.

Ms. Sandra M. Cooper, State Librarian, North Carolina State Library Division

Ms. Cooper said that North Carolina's libraries have a tremendous stake in the decision that the committee makes. There are a number of issues they would like for the committee to consider, and they see this as an incredible opportunity for North Carolina but the challenge is enormous.

The State Library has three Statutory roles: (1) to work in partnership with local communities to improve library service, (2) to coordinate efforts of all types of libraries to make sure that every community and institution in North Carolina has the very best library service, and (3) to deliver library service. She continued that the library should begin the task of making the resources like the Archives resources available throughout the state and beyond. The plan has four strategic directions: (1) Access - making it easier for people to get the information they need, (2) Services - improving services by sharing knowledge, ideas, expertise, and costs, (3) Materials - expanding collections and making them accessible, and (4) Advocacy - meeting the challenges.

The State Library's coordinating efforts of all types of libraries stem from the State Library Commission's Interlibrary Cooperation Committee; and, in 1998-99 the Committee developed *North Carolina Libraries: Building Communities--a Plan for Library Cooperation*, adopted June 1999 by State Library Commission. The vision of the State Library is that all of North Carolina's libraries work together to enhance services and access to information so that the people of North Carolina are empowered by knowledge. North Carolina's State Library has a long history of working together that has been

reinvigorated in the last four years as they have brought up a statewide program called NC LIVE. It is a partnership between the universities of North Carolina, the community colleges, the independent colleges and the Department of Cultural Resources. The State Library feels that by working together they can build on the strength of each institution in order to deliver better library services to the patrons of all of those libraries.

Ms. Cooper mentioned a conference scheduled next week in High Point which will bring together leaders from across the state with a stake in seeing that cultural resources are readily accessible using the Internet. Some of the speakers are national and state leaders who will speak of the work being done in other states. The State Librarian in Virginia will be talking about their program and how it is funded. She does know the majority of their funds come from the State of Virginia. Virginia treasures its history and made it a high priority and made it accessible.

Additionally, Ms. Cooper stated that there is a group known as "The Working Group" which is focusing on the collections about North Carolina and held by North Carolina cultural institutions. The Group consists of libraries, archives, museums, and historical associations. The Working Group suggests to this committee that the challenge go beyond public records in the State Archives.

The members of The Working Group have some questions and issues that they would urge the committee to consider in their deliberations. Who is the audience for the material that is being made available on the Internet and what is the scope of this "virtual collection?" Also, how can we assure that people can access once the information is digitized or if they can access it at all? Furthermore, what are the standards that will be used and what are the legal constraints?

The audience is everybody. The State of Colorado defines five audiences: (1) general users, (2) learners (k-20 and lifelong), (3) hobbyist, (4) scholar/researcher, and (5) business/commercial users.

Ms. Cooper said that ensuring that the records on the Internet are accessible and usable is hard work. This is where standards come into action. Standards create a common language that guides the user to online resources. Standards create computer-readable systems that use a common language to allow the user to find resources easily. Old-fashioned library cataloging is based on standards and is still an important tool. Archivists still create finding aids to guide users to the resources in their collections. Librarians and archivists today also use terms like "Metadata", EAD, SGML and HTML. All of these are related standards that create a common language to assure access. Standards also assure that the technology that is used is compatible.

There are legal constraints that the library has to consider, such as who owns the items to be digitized, who will hold copyright, and are there other issues that must be considered?

The Internet, the World Wide Web, and digital technology are transforming citizens' lives. Real benefits can already be seen from expanded access in eliminating the barrier of distance, isolation, and poverty. Technology expands educational opportunities from the youngest to the oldest. These opportunities can support economic development and underscore North Carolina's reputation as a leader in technology.

The task for North Carolina is enormous and without a clear strategy that defines the role of the state in opening cultural resources to all, the state will not make progress.

The Working Group and North Carolina's libraries urge the committee to examine the entire picture of opportunities, not just a piece of the puzzle. The committee should set clear priorities based on the needs, plan carefully to assure access, and support a collaborative approach.

In response to a question from Representative Gulley, Ms. Cooper stated that the viewer is a piece of software. Also, panorama is one that can be used to view HTML but is not always reliable and a challenge to use.

Mr. Ferriero wanted to reinforce a comment that Ms. Cooper made about the impact on K through 12 education by his experience. Duke University Library has digitized civil war materials for Duke history students but are getting uses and e-mail from K-12 teachers from all over the county and even from Australia about how they are using this in their history courses. This shows the impact this type of program is going to have on education.

**North Carolina Association of Registers of Deeds
Ann Shaw, President, 1999-2000**

Ms. Shaw stated that their records are permanent, and that means that Registers of Deeds maintain real estate records that are as much as 200-300 years old. Economic development agencies that are trying to convince businesses and industries to relocate in their county are searching the Internet for access to county records.

The Registers of Deeds hard copy records migrated from hand-written books to typed records and to different types of photographic processes. Microfilm (either aperture cards or reel film) came into being in the 60's as the offices began to run out of space. Microfilm was popular until 80's and 90's when

imaging technology became available. This new technology gave the ability to integrate the information with the images.

Ms. Shaw recounted her experience with Randolph County Registers of Deeds office. The office migrated from books to microfilm in 1971 and by 1986 was creating reel film for public use. In 1989 the vendor helped them by adding imaging cards to an existing PC, bought a Fujitsu scanner, a large format monitor and an optical disk drive that created a stand-alone scanning station. In January 1990, the office started scanning documents concurrently with the microfilming process. In 1996, Ms. Shaw's office went to a Windows NT network that integrated the computerized index data with the images so the attorneys and paralegal that use the system could access the image of a deed from the same screen where that searched for a property owner's name. In 1998, an automated recording process was added. This meant that the computer now assigns the date, time, book and page to every document and carries that information through to the indexing and scanning stations. Ms. Shaw's office recently started scanning plats into the system that will decrease storage needs in her office as well as the tax and planning departments who also use these maps.

Ms. Shaw stated that once imaging is started, the conversion of previous data becomes a very important part of the process. The vendor converted their standard TIFF images and indexes data from the two previous systems into the new land records system. During the bid process for a new system they insist on non-proprietary formats for data and images.

Ms. Shaw continued that in Randolph County, the next step is an intranet/internet solution so that other county departments and the world will be able to access the information. The county's GIS information is already available on the Internet.

Also, statewide, registers of deeds are handling document storage and access in a variety of ways, as local funding and public need dictate. Wake and Brunswick counties are the first to provide Internet access to their documents.

Ms. Shaw listed the advantages of imaging as follows:

1. The technology is very modular, can start small and build the system as needed.
2. Reduces storage requirements.
3. Unlike microfilm, the image is available immediately.
4. Digitized images can be converted to microfilm to meet archival needs.
5. Images created in a non-proprietary format can easily be migrated to the next level of technology.
6. Functionality of images is increased when integrated with data.
7. Allows agency to comply with requests for bulk data.
8. Intranet/internet availability eliminates need for multiple agencies to house the same information, allows access to remote areas, increases productivity for regular users.
9. Adoption of documents formatting standards and automation will allow acceptance of electronic recording.

In response to questions by Representative Gulley, Ms. Shaw advised that they did not use current optical reels or original optical disks because everything has been converted into the new system. Once you start you have to keep migrating to newer systems.

In response to a question by Senator Kinnaird, Ms. Shaw stated that the original papers were not destroyed but stored in books.

Representative Barefoot asked, "Out of the one-hundred counties in North Carolina, how many Registers of Deeds are still doing it the old way, just books only?" Ms. Shaw stated that there are several counties doing it the old way, maybe twenty-five.

Mr. Cherry inquired if there is a legal definition of an official deed, and if you are going into court, will one have to have a piece of paper, have to have a book, or will an image from one of the digitized cards stand up in court? Ms. Shaw stated that, as far as she knows, the digital image will suffice, if you can prove that is the normal process for recording documents in your office.

Mr. Ferriero stated that he is concerned about the lack of standards at this point and the amount of activity going on in terms of generating these digital repositories of information. There was concern that without the development of consistent standards there is the inability to share that information you are going to have to integrate.

Representative Jeffus asked for committee discussion. Genealogy is to be heard from at a later meeting. She asked if they would like a site visit? A suggestion was made to visit the Division of Archives and History. Mr. Cherry thought that maybe the committee should hear from a school representative.

MARCH 6, 2000

On March 6 the Committee held its second meeting that included a discussion of the Conference on Special Collections, and a site visit to the Department of Cultural Resources, Division of Archives and History.

Debriefing on Leadership Conference on Access to Special Collections High Point, NC - March 1-2, 2000

This conference was announced at the February 24 Committee meeting. The Special Working Group invited about a hundred people to talk about ways to provide access to the cultural resources of the State. It was a historic conference, as it appeared to be the first time that librarians, archivists, museum curators, people responsible for cultural heritage, as well as state legislators and concerned citizens were assembled to talk about digitization.

Members of the committee attending the meeting and members of the audience were given an opportunity to share reactions to what they heard and learned. Their comments are as follows:

- Mr. Anderson stated that he was very impressed that a community group had gathered to look at similar issues and how to make them available to a larger context of the state, and how to make a greater use of the Internet and communications. Also, a discussion about how the state can position itself as a leader by making cultural resources available to the public. The material at the meeting broaden his views as what could be done to make material available. Mr. Anderson stated that it made him aware of the many opportunities North Carolina has to use the cultural assets in attracting the travelers and tourism to the State of North Carolina. Our cultural assets will provide a return on the investment.

- Representative Barefoot agreed that it opens up a world of possibilities but we will have to figure out the best possible way to do it.
- Representative Jeffus made the comment that she was very interested in Virginia and what they were doing, and would like to learn more at some point in time. The conference gave her more of a direction, and the surprise was that there is more going on than she realized. She thought that the committee could use much of that information to give this committee a direction as to what we need to do and where to go.
- Mr. Cherry made the following observations. Before we start, we need a working knowledge of what is held in small collections and large collections. There are a lot of treasures in closets, and we found that to be the case at least in Rowan and Buncombe Counties. They looked at forty-four different sites from the National Climatic Data Center in Asheville, where there are 160 employees, to the Unity Presbyterian Church Heritage Museum with two volunteers. Both places have treasuries. There are one billion photographs alone held by depositories in Rowan and Buncombe Counties. If we add the other ninety-eight counties, we must have a workable plan. It was an educational experience to go out and talk with these folks.
- Mr. Cherry stated that Mr. Nolan Yelich, Director of the Library of Virginia, had reported that the governor uses the site they put together to show off the possibilities and what his state has done toward leading the way to digital technology.

- Mr. Jeffery Crow, Director, Division of Archives and History, advised that he planned to accompany Secretary Betty Ray McCain, Cathy Morris, and Mr. David Olson on a tour of the Library of Virginia on March 20-21.
- Senator Kinnaird suggested that the Appropriations Committee chairs be invited to go if this committee plans a trip to the Library of Virginia.
- Mr. David Olson, Acting Deputy Director, Division of Archives and History, wondered what could be accomplished if we brought together museum people, archivist, historians, and people involved in the political process at a conference. It was amazing to him how the boundaries that were erected professionally are in a way now artificial due to the affects of the new technology and the fact that all have common needs in the area of digitization. By the same token, how sobering it is to see, at another level, how other states are making great progress. Certainly, it is something we want to do as well.
- Ms. Catherine J. (Cathy) Morris, Acting State Archivist, Division of Archives and History, added that it was a dynamic conference. People from other states pointed out what they were able to accomplish.
- Mr. Ferriero stated that even though North Carolina is behind those other states (Virginia, California, Colorado, and Georgia) at the conference, North Carolina is in a very good position to learn from their mistakes and not replicate. He stated that The Working Group is meeting next Wednesday to determine their next step.

Rep. Gulley brought some diskettes from twenty-five years ago and the stored material is still there but there is nothing on which to read it. This is an example why migration is so important as new technology is available.

The committee adjourned at the Legislative Building to reconvene at the Archives and History building on Jones Street.

**North Carolina Department of Cultural Resources
Site Visit - Division of Archives and History**

The tour began in the Search Room where the Committee saw the traditional finding aids, including the registers, card catalogs and publish guides. Essentially, this portion of the meeting gave the Committee an opportunity to see the records and discuss the management of resources about which decisions would be made in regards to access and preservation.

The tour continued to the first level of the archives stack area, security vault, conservation lab, imaging lab (imaging services produced 2,694 reels of microfilm during the fiscal year 1998-99), and through the tunnel to one of the records storage areas that are under records retention and disposition schedules. Less than five percent are sent to the search room to be retained. The State Records Center contains over 129,000 cubic feet of records. An additional 21,500 cubic feet of records are stored in offsite facilities. Requests for these records average about 30,000 per fiscal year. For the fiscal year 1998-99 under retention and disposition guidelines over 14,400 cubic feet of state agency records were destroyed.

The State Archives retains over 100 million original documents, over 500,000 reels of microfilm, more than 900,000 photographic negatives, and thousands of land grants, historic maps, rare books, and other records accessible to the public.

The archival program was founded in 1903 in North Carolina and is the third oldest in the United States. Alabama and Mississippi have older archival programs.

President Franklin Delano Roosevelt in October 10, 1934, appointed Dr. R. D. W. Connor as the first archivist of the United States. Dr. Connor was the first secretary of the North Carolina Historical Commission.

When the Committee reassembled in the Search Room Ms. Druscilla (Drussy) Simpson presented an overview of the web site for North Carolina Archives and History and also showed what Virginia has on their site. Archives and History has many academic records on defunct schools in North Carolina. Volunteers put County information on the web but not all counties have web sites. They have a lot of information on microfilm to scan to digitize records. A vendor suggested scanning the documents, do the microfilm, and have the microfilm as backup. Then as technology changes, rather than trying to migrate these millions of images over and over again, revisit every third or fourth level of technology and rescan the microfilm. In the long run, this is cheaper than trying to keep up with two sets.

The committee then looked over the "Treasures" of State Archives and History on display for non-textual material such as film, photographs, and military collections (an on-going project). They saw an example of material Archives and History would like to digitize such as the H. H. Brimley photo collection.

Mr. Ferriero thanked the number of people involved in their tour of the Division and the committee was able to see the needs of the Division.

Deputy Secretary Elizabeth Buford believed that the Committee had seen that there is much to be done. She made her plea to the members to start in the short session with an appropriation, no matter how small the start.

Representative Gulley stated that he had been in the computer business for thirty years and the computer representatives told him how the computer industry was going to make the paper industry go away. "Well, someone has been lying to me!"

Mr. David Olson, Acting Director, Division of Archives and History, stated that they were fortunate that the land records for Edgecombe County were on microfilm since the building where the records were kept was flooded in 1999. Land records for all the counties are not on microfilm. We need to see that land records are protected, because they are extremely important.

Mr. Ferriero announced that for the next meeting they would invite representatives from the "user community." The first meeting was on "custodians of the records," and today they saw those records and now we want to turn our attention to the people who use the records. Representative Jeffus has contacted Judge Tom Ross, Director, Administrative Office of the Courts, to speak at the next meeting. Others suggestions included a genealogist (maybe Beverly Tetterton or Helen Leary), a representative of the Association of Surveyors, a member of the North Carolina Association of State Historians, and a

representative from the Department of Public Instruction. Ms. Nelson will contact representatives of these groups to speak to the committee at an upcoming meeting.

Mr. Ferriero asked for opinions regarding a visit to the Library of Virginia in Richmond? Several stated that they would like to see it. Monday, April 10 was the suggested date. Mr. Ferriero will contact Dr. Nolan Yelich, Library of Virginia, to check the date of April 10 as a possibility of visiting.

MARCH 30, 2000

The Committee met for the third time on March 30. This meeting was designed to hear from members of the "user community."

POTENTIAL USERS OF A STATE DIGITIZED PUBLIC RECORDS SYSTEM

SCHOLAR

The first presenter was Dr. Donald G. Mathews, Assistant Dean of the College of Arts and Sciences and Professor of History at the University of North Carolina in Chapel Hill. He explained why a scholar would want to see records made available to scholars, students of history, political science, public affairs, and related fields.

Dr. Mathews broke down the benefits of digitization into five categories: (1) preserving records, (2) disseminating and publishing information, (3) providing authentic information in a medium especially susceptible to hoaxes, (4) teaching school children how to use the internet to understand their world, and (5) serving the people of North Carolina. The use of digitization improves the chances for keeping important public records safe and allows the use of public records in such a way as to avoid damage to the originals. Digitization adds to the life of public records and makes possible their increased usage on the

Internet by a broad audience throughout the world. People interested in touring or locating in North Carolina could find a broad range of information so they could make informed decisions with regard to coming, seeing or investing in the state. Placing the records on the Internet would be a great educational tool, especially for students.

He stated that truth on the Internet is needed because false "original documents" are circulating as fast as people can invent them on a variety of subjects. Therefore, the records held by the state archives could be digitized to provide authentic documents with true information. School children are already being taught on the use of the Internet. Dr. Mathews continued that the School of Education at UNC-CH developed LEARN NORTH CAROLINA which creates lessons and makes them available to teachers and students. One of their lessons uses materials from the Southern Historical Collection, the North Carolina Collection and the North Carolina Collection Gallery but none from the state archives. The records are not available from one of the best state archives in the United States.

In closing, Dr. Matthews stated that digitization is an enticement to people to check into the details of issues and is an educational device for students.

GENEALOGY

The next presenter was Mr. Richard Ellington, President of the Durham-Orange Genealogical Society. This is a group of amateur genealogists dedicated to encouraging the preservation of family records and other records of historical interest. Also, they promote educational programs relating to genealogical or historical interests.

Slides were shown to the members that included the Resolution of the Board of Directors of the Durham-Orange Genealogical Society, Inc.

Mr. Ellington sees the digitization of records as a vital service to the business community of North Carolina and to the individual that is interested in tracking their lineage. He requested that the Legislature authorize a program of active restoration and preservation of the documented history along with a program of digitization and electronic capture, storage, and access.

PROFESSIONAL GENEALOGIST

Ms. Helen F. M. Leary is a Certified Genealogist, a Certified Genealogical Lecturer, a Fellow of the American Society of Genealogists, and a Trustee of the National Genealogical Society.

According to Ms. Leary, there are both hobby and professional genealogists that are serious researchers whose goal is to discover and record historical truth. Some are students in school who have been assigned a family-history project by their teachers which is a matter of tracing one's link from the present to the distant past.

Genealogists are responsible members of the research community and adhere to standards that affect their conduct and work product. They recommend funding for archival staff, equipment, and supplies needed for the digitizing project. They recommend two types of records be included: (1) Images of the Archives' finding aids, and (2) Images of original documents. The genealogist's goal is to assemble a reconstructed family history that is as close to the truth as possible.

It was suggested that the quality of the equipment used for scanning be capable of high-resolution reproduction. The benefits of the project of digitization are worth the investment needed to inaugurate and continue it.

Ms. Leary lectures often outside of North Carolina and answers questions about Tar Heels of ages past. She has experienced the appreciation of North Carolina's history and archives. She stated that on-line digitized finding aids and documents only increase that appreciation. She continued that North Carolina's website is often compared with Virginia's web page. Despite Virginia's problems, their web site is a valuable research tool, and its value enhances the reputation of Virginia and its library-archives. North Carolina's archives is better organized and records more accessible. She further stated that even if there were no other use for the digitized records than to advertise these virtues, this project would be a wise investment.

ADMINISTRATIVE OFFICE OF THE COURTS

Mr. Michael J. Unruh, Record Officer, Administrative Office of the Courts (AOC), stated that they have not fully implemented the digitization or imaging of their paper records.

He presented visual aids during his remarks.

Mr. Unruh 's primary responsibility is to manage the paper records. Digitization is something AOC has wanted to get into for a long time but have not gotten into it in a big way. One of their projects is to image some of their core court records. The records are currently maintained in large, leather-bound books (15 inches wide, 20 inches tall and 4 inches thick when closed). In the state's courthouses there are thousands of them. The old volumes hold vital information and must be retained permanently. This situation presents three problems: (1) the books take up valuable space in the courthouses, (2) they are

cumbersome to work with, and (3) their frequent use is literally wearing them away, destroying vital information.

Through AOC's first experience, the agency has learned not to underfund or underpower the system. It increases productivity and produces a better product with a more powerful system.

Mr. Unruh concluded that digital imaging technology has been around for over twenty years, has been proven to work, its limitations are well known and can be effectively overcome. After the basic infrastructure costs have been absorbed, the cost-effective applications of this technology in the courts are almost unlimited. The court records would benefit from a switch from paper to digital form.

EDUCATIONAL TECHNOLOGIES

Ms. Frances Bryant Bradburn, Director of Instructional Technologies, and John C. Brim, Educational Resources, for North Carolina Department of Public Instruction, talked about their perspective on the digitization of state records. State Archives has been helping schools for years. Recently, they have been digitizing some documents in DPI, particularly, putting together collections for students.

DPI approached this project with two perspectives. The first was the administrative perspective and this was actually keeping personnel records that schools and school systems deal with every day. The second was the instructional perspective that focused on a primary source document contained throughout state government that can be used for research and for class projects.

There are four main issues for administration of school records:

(1) The first one is storage. This is a big issue of where to store the records. They showed slide pictures of conditions of storage at several schools. Students' records are considered permanent records for the State of North Carolina and they must be maintained for at least one hundred years. This has created a large storage problem in North Carolina.

(2) The next problem is accessibility of the files. The slides that Mr. Brim was showing proved what a problem it is to find the files for a certain past student. Digitization would help greatly with these school records.

(3) The records must be financially manageable.

(4) One of the most important issues is the permanency.

Ms. Bradburn stated that she wanted to leave the committee with a little food for thought. The first one is that across the state, the nation and the world, we are moving to a paperless environment. Secondly what does the future hold for student records? It is important to address this for the future of transcripts and permanent records.

It is much more fun to think about the educational potential, i.e. primary documents for instruction and educational research across the nation. She referred to the American Memory Project that is a federal project begun in the early 1990's for teachers and students to use. Mr. Brim told about the vast information that is included in the project and showed slides and explained what was being viewed.

Ms. Bradburn continued that it is educational for students to make field trips, and the reality of it is that often times it is impossible to do so. Mr. Brim showed the committee what the student would see when they visited the site. One of reasons for them to begin digitization was to show photographs to

prepare students for their field trip to Raleigh and also to show the ones that could not come due to distance, etc., things to be seen on the trip.

Mr. Anderson asked, if you had your wishes and if the material in the State Archives were digitized, could you see putting together comparable presentations. Ms. Bradburn stated this was why she had highlighted the American Memory Project because state archives materials could be used in the same way.

Ms. Bradburn answered a question posed to her. She stated that SIMS is supplementing paper, the data is still kept at the school level, and they are still using paper copies which are transferred to microfilm and then that is sent to the state in a digital format. With the new system, NCY has the potential of becoming completely digitized. There is technology now to allow you to scan to make security microfiche. They hope that technology will be in place to take out that one step.

Representative Jeffus announced that the next meeting was scheduled for Monday, April 10, 2000, at 9:00 A.M. The Committee will meet in Room 1027 for a short meeting and then adjourn and reconvene in Richmond to tour The Library of Virginia.

APRIL 10, 2000

The Committee held its final meeting before the Short Session on April 10.

Mr. Ferriero summed up the previous meetings by stating that they have heard from the custodians of the public records and some potential users. They have heard in terms of issues surrounding what we are up to. We have heard about storage, environmental conditions needs, access needs, and

funding issues. These are the things that come to mind as the meeting goes to The Library of Virginia to take a look at what they have done.

The Virginia State Librarian has arranged transportation for the group and will take us first to the Records Center and then to the State Library where they will be hosting lunch for members with some of his staff. It will be a working lunch and the Library of Virginia staff will talk about their accomplishments. Then the Committee will talk afterwards about how to process the information and how it fits into the report.

Mr. Morrison asked if there was another planned meeting to follow-up. Mr. Ferriero stated that there is not one scheduled, and after everyone has had a chance to look at the report from the Committee to the Legislative Research Commission, then we will decide whether another meeting is necessary.

Ms. Nelson stated that the deadline for the report is April 28 and is a short time frame in which to prepare cumulative reports of all Legislative Research Committees.

Mr. Morrison stated that a lot of information had been collected but we had never had time to sit down and discuss it. Rep. Jeffus followed up by saying that if we are going to meet for a discussion then they will have to meet soon. Mr. Morrison stated that due to the report having to be prepared and approved shortly, at some point, even after the session, the Committee needs to meet and have a discussion. Ms. Nelson stated that because of the session, they have a given time to begin and end. Rep. Jeffus stated they are trying to decide if they need to have another meeting prior to the report or do it by mail. Rep. Jeffus followed that she and Mr. Ferriero will get together and discuss the meeting dates following Session. If Session is not too long, the next meeting could be in September 2000.

Mr. Ferriero asked if there was any other business before they adjourned. Information on where to go to board the plane for Richmond, Virginia was given to the members. The meeting adjourned at 9:30 A.M., to continue in Richmond.

**Site Visit - Library of Virginia
Richmond, Virginia**

The Committee was met at the airport in Richmond by Nolan Yelich, Virginia State Librarian; Preston Huff, Director of Records Management & Imaging Services Division of the Library of Virginia; and Dick Harrington, Assistant director of that Division, who served as hosts and tour guides during the visit. Committee members were given an itinerary of the day's events, and an organizational chart of the Library of Virginia.

The first stop was an informative narrated tour of the State Records Center, which opened in September 1999. The records stored in the new facility are those that are low-referenced (requested less often). Records that are high-referenced are stored at the downtown library facility. Mr. Ferguson joined the group at the Center. Impressive features of the facility were:

- Records stored in a large room with a very high ceiling and storage shelves 26 feet high, with large aisles in between the rows of shelves. An electronic forklift allows retrieval of files from the uppermost shelves.
- Boxes of records in bar codes on each box and on the shelf, which allows for easy tracking through database.

- A very large shredder that is used to shred sensitive and/or confidential papers; also, a shredder for microfilm and similar materials.
- A unique -40 degree freezer for the purpose of eradicating possible insect infestation and, should the need arise, it can also be used to stabilize water-damaged records.
- A reference room where records can be viewed on-site, or duplicated.

Lunch was provided by the hosts and accompanied by presentations from Mark Fagerburg, Kip Campbell and Elizabeth Roderwick at the Library of Virginia. Mr. Yelich made opening remarks and introduced the persons making the presentations. Everyone in attendance was asked to introduce him/herself. Joining the group, in addition to the speakers, were Sandy Treadway, Assistant State Librarian; Conly Edwards, State Archivist; Mary Ann Harmon, Vice Chairman of the Library Board; and Jay Johnston, member of the Library Board.

(The tape from the luncheon presentations is very hard to understand especially Mr. Campbell and Mr. Fagerburg's presentations. A disc is being sent to staff, which will provide the information provided by them, and will be available for listening, or when received, may be included in these minutes.)

Mr. Yelich stated that they regard their compilation of information as a means of management collection, share collection and retrieval collection --- a collection-driven program.

The Digital Library preserves, digitizes, and provides access to archival and library collections on an international level. More than 2.2 million original documents, photographs, and maps have been digitized. Each month more than 25,000 database searches are performed.

Mr. Kip Campbell was recognized and gave an overview of the Digital Library using slides. The Library currently has over 88 million manuscript pages in the collection and over a quarter of a million images, prints, photographs, postcards, posters, etc. Mr. Campbell showed slides of three collections. State Library staff does not regard the digital library program as the library preservation media but instead regard microfilm as the preservation medium. There is a ripple effect through the different programs. In response to a question, Mr. Campbell said that field workers in a county and city WPA (Workers Progress Administration) project during the 1930's and early 1940's were assigned the task of going through the state to find every house, commercial building, church, cemetery, bridge, school, whatever that was built in 1860 or earlier. This research was documented by deed title searches, through history, and folklore associated with it. It was photographed, pulled together, and processed as an archival record. On-line search for a record might be by name of the facility or other identification. For instance, a church might be by church name, name of the minister, or other features.

Mr. Mark Fagerburg from Photograph Services spoke of Digital Technology. There is no question but that it is very expensive. The initial set-up for the Digital Technology operation was a quarter of a million dollars, not including staffing. Presently they generate more than \$180,000/year, which stays with them. This section receives orders from all over the world. At the present time, 120 countries have used their services. A reference room is provided for anyone wanting to avail him/herself of the technology.

Elizabeth Roderick, Digital Web Site Section, made the next presentation using slides to demonstrate several projects. When the program was started in 1995 there were two staff members, and one other full-time person besides Ms. Roderick. In the years since then, they have grown to eight

positions: 4 full and 4 part-time. Staff has taken a variety of formats and experimented with them to learn how to handle maps, photographs, original documents, etc. The Section started out with "do-able" projects that would have early success rather than bite off more than it could chew and possibly become discouraged. There is quite a bit of work with maps. The first demonstration was of a map from a Board of Public Works inventory - a dismal swamp canal "trying to find things that are North Carolina-related." This is a very large file, but they digitize from large format microfiche using a compression software product that makes it possible to display very large images efficiently and effectively over the world-wide web. She brought up the image on the screen without losing any of the detail of the map. It can be brought up to allow reading the smallest print on the map. Maps have been digitized from the Petersburg Public Library, as well as, a "wonderful" collection of maps that were stuffed in a closet and otherwise would not have been available. They also use this technology for the maps associated with the VHI (Virginia Historical Inventory) project. In response to the question as to whether the data was searchable, she responded that it was all key word searchable.

Ms. Roderick stated that this, however, is a work in progress. To date, they have cataloged about 18,000 of the approximate 20,000 to 21,000 reports that were generated by the VHI project. They are also cataloging photographs and have digitized the map images. As part of the project, they researched to find how many stone houses were described throughout the state. They use a marked format about 99 percent of the time to create searchable database for all of the materials - whether photographs, documents, maps, etc. For example, there were 372 instances in the database of records describing stone houses. The second demonstration was of a house in Washington County. The details included when it was built (1787), its original shape, the shape it was in when the survey was done, the primary owners, the location (part of the house was temporarily used as a store), and information about the family. If a family bible is in a house, the information is transcribed out of the bible; if in a family cemetery,

information from the headstone is transcribed, and often, interesting pieces of furniture are described. All the subject headings are hypo-linked to allow continuing searching on the subjects. Every word is key word searchable. They attempt to bring together on-line the images of the reports, which are being digitized for microfilm, the photograph of the house that was taken during the project, and the map. Sometimes, speed has to be sacrificed in order to retain image quality, especially with older documents. She brought up that information on the screen of the Washington County house mentioned above - its location, and a very detailed description - 6 typed pages - also a final page giving specific information about the architectural features of the house.

In the third demonstration, the VHI project workers had taken a county highway map and sited the locations of the houses and the stores, schools, etc. directly on the map. The map was digitized, showing the location for each structure. It is possible to access the map and pull up the location of all cemeteries, taverns, etc. in the state, a fabulous resource for the public. She was asked if this was part of Virginia's system - "did you develop it?". They did not. The information is not limited to Virginia.

The final sample of work was a local public library collection of 3500 images. The section works with the local public libraries, local historical societies, etc. to select projects and take the projects from start to finish. Staff either works with the materials on-site, or if the persons they are working with are not comfortable with that, they remove the materials to another location for scanning and cataloging. Reviewing projects is continuous. The objective is to provide every public library with an opportunity to participate - a multi-year project. Local partnership is encouraged between the local historical societies, the local libraries, and any other appropriate civic group to pull together to work on these projects. The sky's the limit on the amount of detail that can be added and all is fully searchable.

Following lunch and the presentations, the group toured the State Library facilities, the Digital Imaging Branch and Archives. Offices were visited where work was in process in the preservation of materials which are made available to its citizens through digital processing; among others, family bible

information, very old newspaper articles, death records, and photographs. All of the preserved projects can be viewed on-line. The records are stored on movable shelving.

The tour ended with a view of areas provided for citizens to avail themselves on-site of the available resources, or for a fee, taking advantage of the photo copying, and faxing equipment provided.

FINDINGS AND RECOMMENDATION

The primary focus of the Committee during the 1999-2000 interim was that of fact finding and information gathering. The Committee received significant information in terms of both content and volume relative to the status of the State's public records system and the requirements of some of the users of the system. However, there was not sufficient time to complete this research prior to the 2000 Short Session. More extensive work and exploration of issues are planned for the 2000-01 interim. The Committee commends to the Legislative services Commission the findings and recommendation highlighted below:

FINDINGS

From the information presented, the Committee finds that:

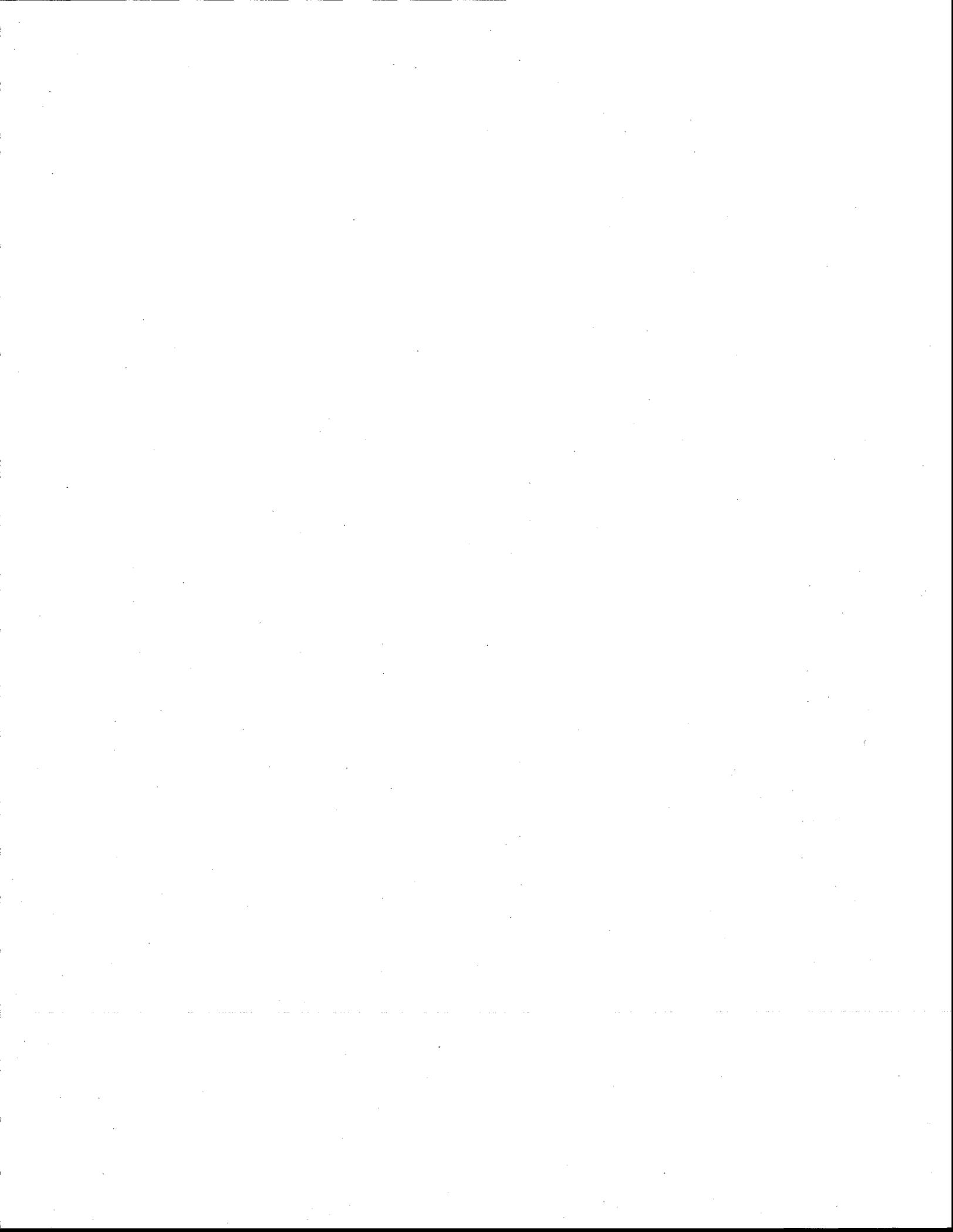
- 1) Paper and microfilm continue to offer a more permanent means of maintaining public records. Digitization is a medium for access but not for preservation, and a plan to address public records storage is essential to preservation of archival documents.

- 2) The massive volumes of information held in depositories statewide necessitate development of consistent standards for both organization and description of information and Internet access that follows the old-fashioned library cataloging system; and preparation of a workable plan for access, i.e. digitization.

- 3) The Division of Archives and History needs to resume the input of data into the Manuscript and Archives Reference System (MARS), the primary finding-aid for archival information.

RECOMMENDATION

The LRC on Digitization of Public Records by State Archives should continue its research of digitized public records systems, and develop a plan with recommendations for digitization of North Carolina's public records and for implementation of the system in the future.



APPENDIX A

CHAPTER 395 1999 Session Laws (1999 Session)

AN ACT TO AUTHORIZE STUDIES BY THE LEGISLATIVE RESEARCH COMMISSION, TO CREATE VARIOUS STUDY COMMISSIONS, TO DIRECT STATE AGENCIES AND LEGISLATIVE OVERSIGHT COMMITTEES AND COMMISSIONS TO STUDY SPECIFIED ISSUES, AND TO AMEND OTHER LAWS.

The General Assembly of North Carolina enacts:

PART I.-----TITLE

Section 1. This act shall be known as "The Studies Act of 1999".

PART II.-----LEGISLATIVE RESEARCH COMMISSION

Section 2.1. The Legislative Research Commission may study the topics listed below. When applicable, the bill or resolution that originally proposed the issue or study and the name of the sponsor is listed. Unless otherwise specified, the listed bill or resolution refers to the measure introduced in the 1999 Regular Session of the 1999 General Assembly. The Commission may consider the original bill or resolution in determining the nature, scope, and aspects of the study.

...

(1) h. Digitization of public records by the Division of State Archives (Jeffus)

...

PART XXIII.-----EFFECTIVE DATE AND APPLICABILITY

Section 23.1. Except as otherwise specifically provided, this act becomes effective July 1, 1999. If a study is authorized both in this act and the Current Operations Appropriations Act of 1999, the study shall be implemented in accordance with the Current Operations Appropriations Act of 1999 as ratified.

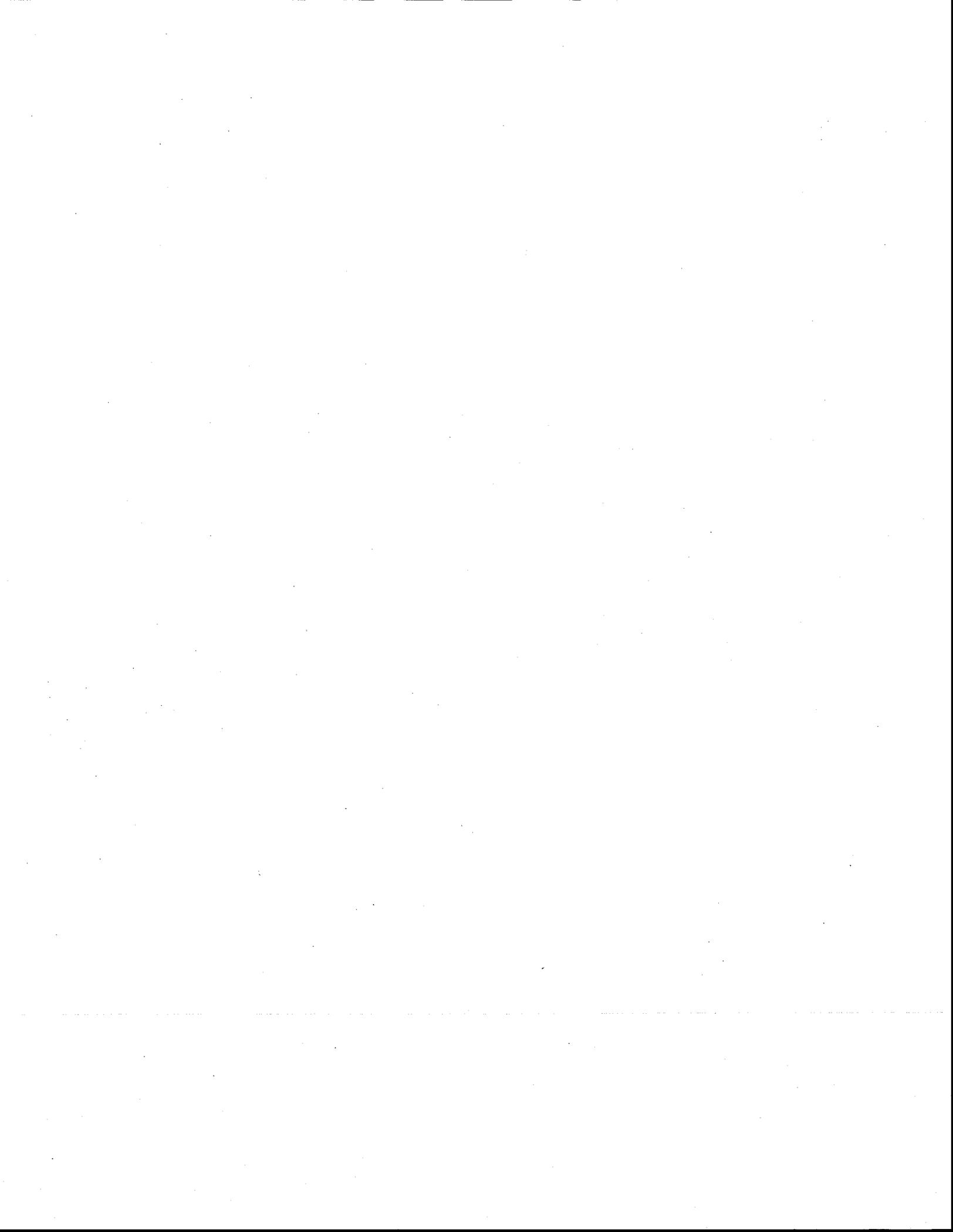
In the General Assembly read three times and ratified this the 21st day of July, 1999.

s/ Dennis A. Wicker
President of the Senate

s/ James B. Black
Speaker of the House of Representatives

s/ James B. Hunt, Jr.
Governor

Approved 9:03 p.m. this 5th day of August, 1999



APPENDIX B

DIGITIZATION OF PUBLIC RECORDS BY STATE ARCHIVES COMMITTEE MEMBERSHIP 1999-2000

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